TEKSAV TEKNOLOJİ Elektrik Elektronik Makina Sanayi ve Ticaret A.Ş.
İAOSB 10016 Sokak No:20 Çiğli - İzmir / Türkiye
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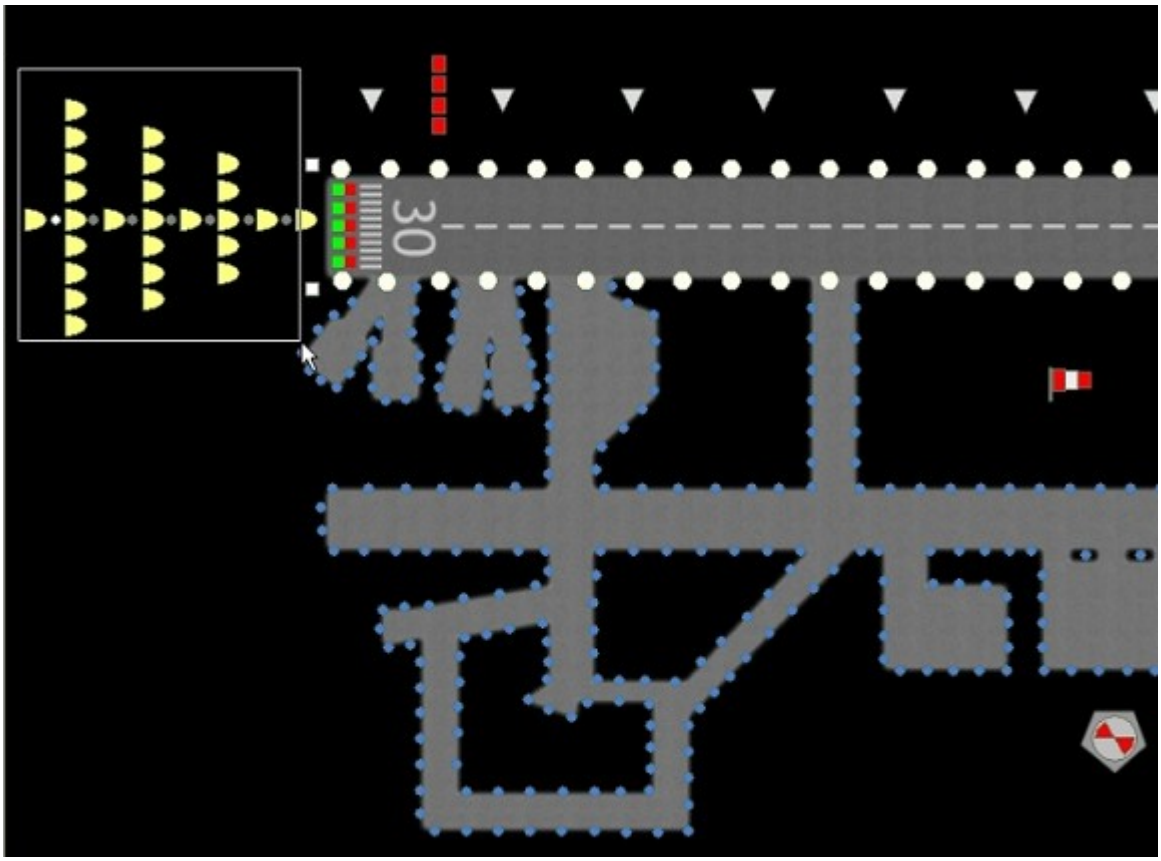
REVISION SHEET

#	Date	Description	Done by	Approved by
1	May 2006		Yavuz Özdemir	Dr. S. Akdurak
2	July 2006	Modification	Yavuz Özdemir	Dr. S. Akdurak
3	Aug 2006	Modification	Yavuz Özdemir	Dr. S. Akdurak
4	Nov 2006	Modification	Yavuz Özdemir	Dr. S. Akdurak
5	March 2010	upgrading	P. Akdurak	Dr. S. Akdurak

All changes to this document have to be recorded to the revision sheet.



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INDEX

MAIN WINDOW....4
SETTINGS....5
PASSWORD....5
CHANGE PASSWORD....5
SYSTEM....6
System Design....7
Runtime Configuration....8
IP and Mask Assignment....8
SERVICE....9
Buttons and service modes....9
FILES....10
DESIGNER....10
CCR (Constant Current Regulator)....10
CELL....11
Lights....11
Working Modes....11
Buttons....12
Files....12
Cells....13
Groups & CCRs....14
Lights....15
Alignment....16
Selection....16
PopUp Menu....16
CONTROL....17
Control Menu....18

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MAIN WINDOW

By this module, you can define all system parameters and run design and control module. touch screens , user friendly control is guaranteed

The master PC is showing on the left upper corner, the used PC is showing on the right bottom corner.

Management menu includes below items.

Settings	Sets serial (com) port for the switchs and system name.
Change Password	Changes the system password.
Service	Runs the Service Module.
Designer	Runs the Designer Module.
Control	Runs the Control Module.

Exit	Exits the software.

SETTINGS

Com Port for Swithes	Sets serial (com) port for the switchs.
System Name	Sets the system name that showing control module.

PASSWORD

System is under protection for entering by unauthorized people without password. The password is case sensitive. After three wrong trails software will stop.

CHANGE PASSWORD

The system will start existing password which have been logged by the manufacturer. You can create your own password should be at least 4 characters up 15. Retype your new password.

SYSTEM

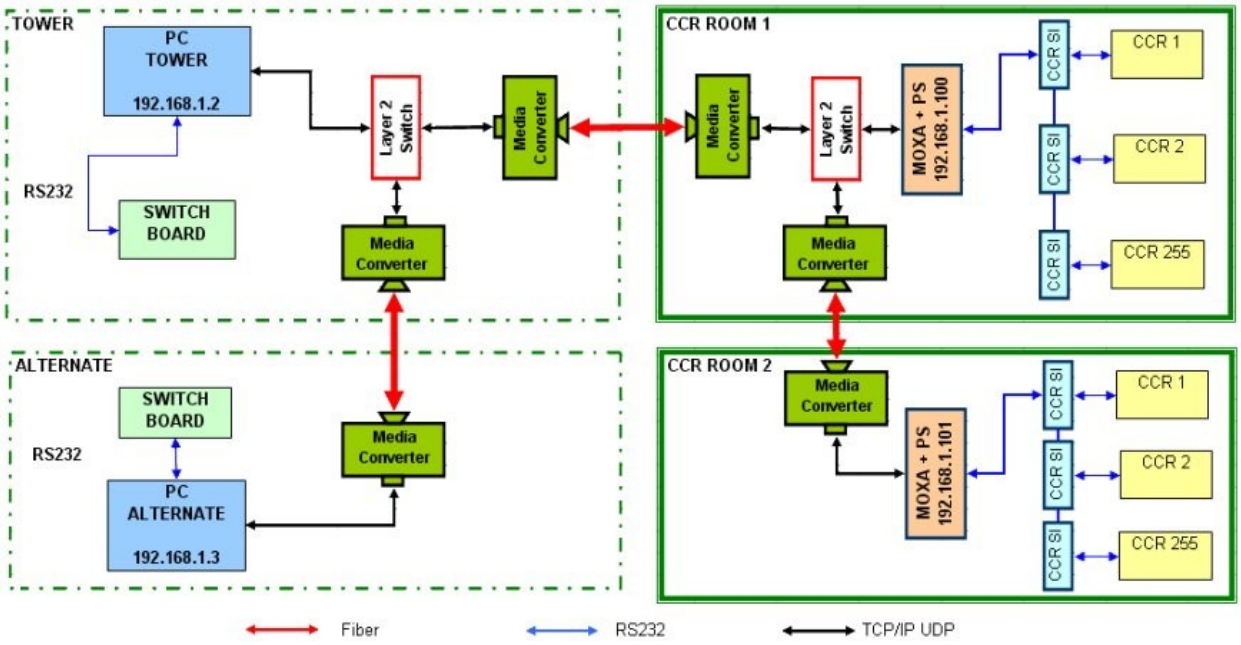
RCD-2000FX, Remote Control Desk with Fiber Optic includes;

PC	• **Shuttle XPC SS59G:** LGA775, Sis 661FX, 500/533 MHz, 2xDDR400, 64 MB integrated graphic card, AGP 8X, 1xPCI, 1xATA133, 2xSerial ATA, Raid support, I.C.E. Heat Pipe, Ethernet, 6 channels speaker, 2xFirewire, 6xUSB 2.0 • **CPU:** Intel Celeron 3.2 MHz • **Disk:** 80 GB Samsung • **Memory:** 512 MB DDR 400 • **CD-RW:** LG 52x32x52 • **Keyboard:** Logitech Media • **Mouse:** A4 Tech 620 Optic Mouse • **Graphics Adaptor:** Sparkle GeForce FX5200 128 MB DDR+TV • **Display:** View Sonic VA1912W Wide MultiMedia Digital LCD
Media Converter	Allied Telesyn AT-MC102XL: 100Base-TX to 100Base-FX Fast Ethernet Converter

TEKSAV TEKNOLOJİ

Ethernet to Serial Converter	MOXA 4110S, Ethetnet to Serial (RS232) Converter
Ethernet Switch	Allied Telesyn AT-FS708 Fast Ethernet Switch
Fiber Cable	HCS, Armored Single Loose Tube Fiber Optic Cables, Black, 62.5/125 micron, 4 cores
Patch Panel	HSC Multimedia Box

System Design



Runtime Configuration

The minimum configuration of RCD-2000FX is listed below:

- 1440 x 900 pixels Screen Resolution
- Highest (32 bit) Color quality
- Fast ethernet
- Microsoft Windows XP with Service Pack 2
- 5 MB free disk space (except log files)
- Graphic Card with 64 MB

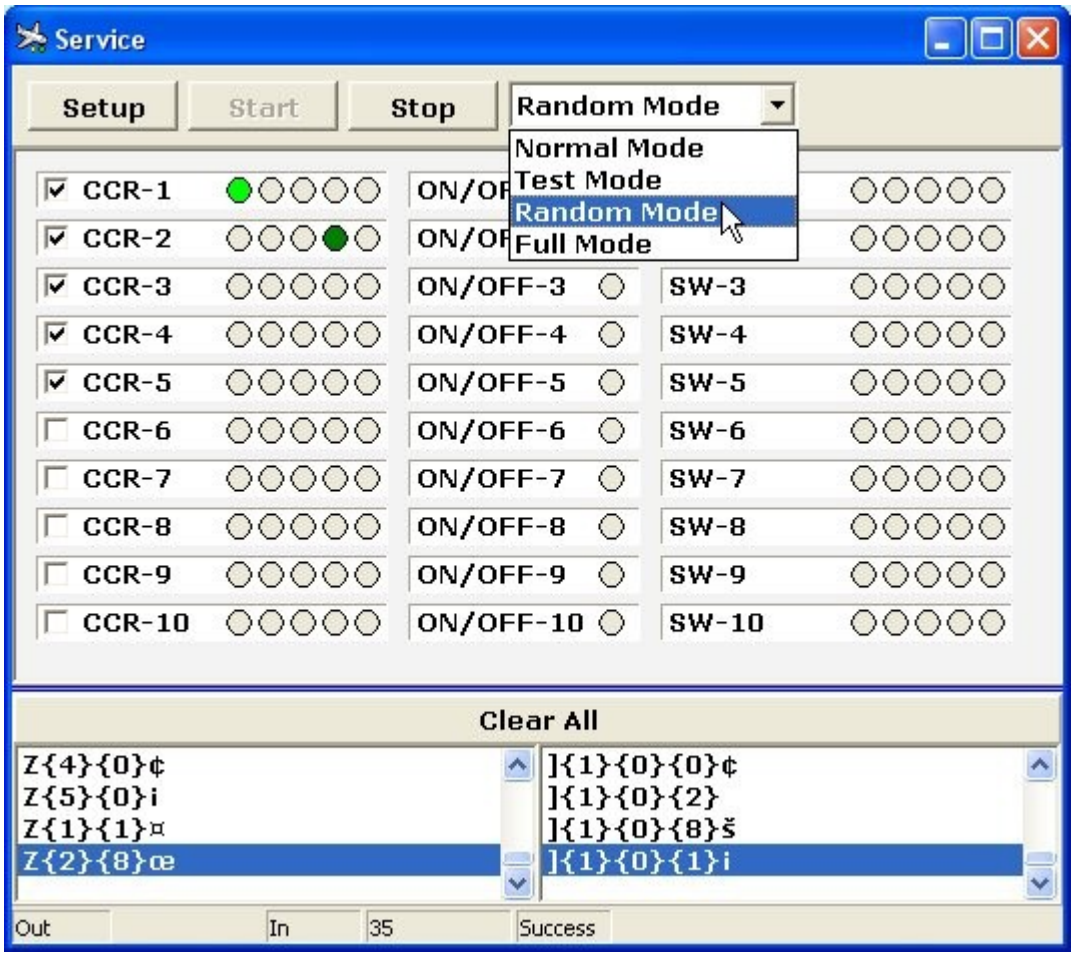
IP and Mask Assignment

IP and Mask assignments listed below:

Hardware	IP	Mask	Name
Tower Computer	192.168.1.2	255.255.255.0	RCD1
Shelter Computer	192.168.1.3	255.255.255.0	RCD2
Other Computers	192.168.1.*x* *x: 4..99*	255.255.255.0	RCD*y* *y:3..99*
Cell (Moxa)	192.168.1.100	255.255.255.0	
Other Cells	192.168.1.*z* *z: 101..150*	255.255.255.0	

SERVICE

This module checks the selected cell's CCRs and switches.



Buttons and service modes

Setup	Setup the service parameters.
Start	Start the service process.
Stop	Stop the service process.
Service Modes	• **Normal Mode:** Query the cell CCRs only. If you set the channel, please click gray circle. • **Test Mode:** System automatically sets the CCR channels to all levels in sequentially. • **Random Mode:** System automatically sets the CCR channels to random level. • **Full Mode:** System automatically sets the CCR channels to full level.

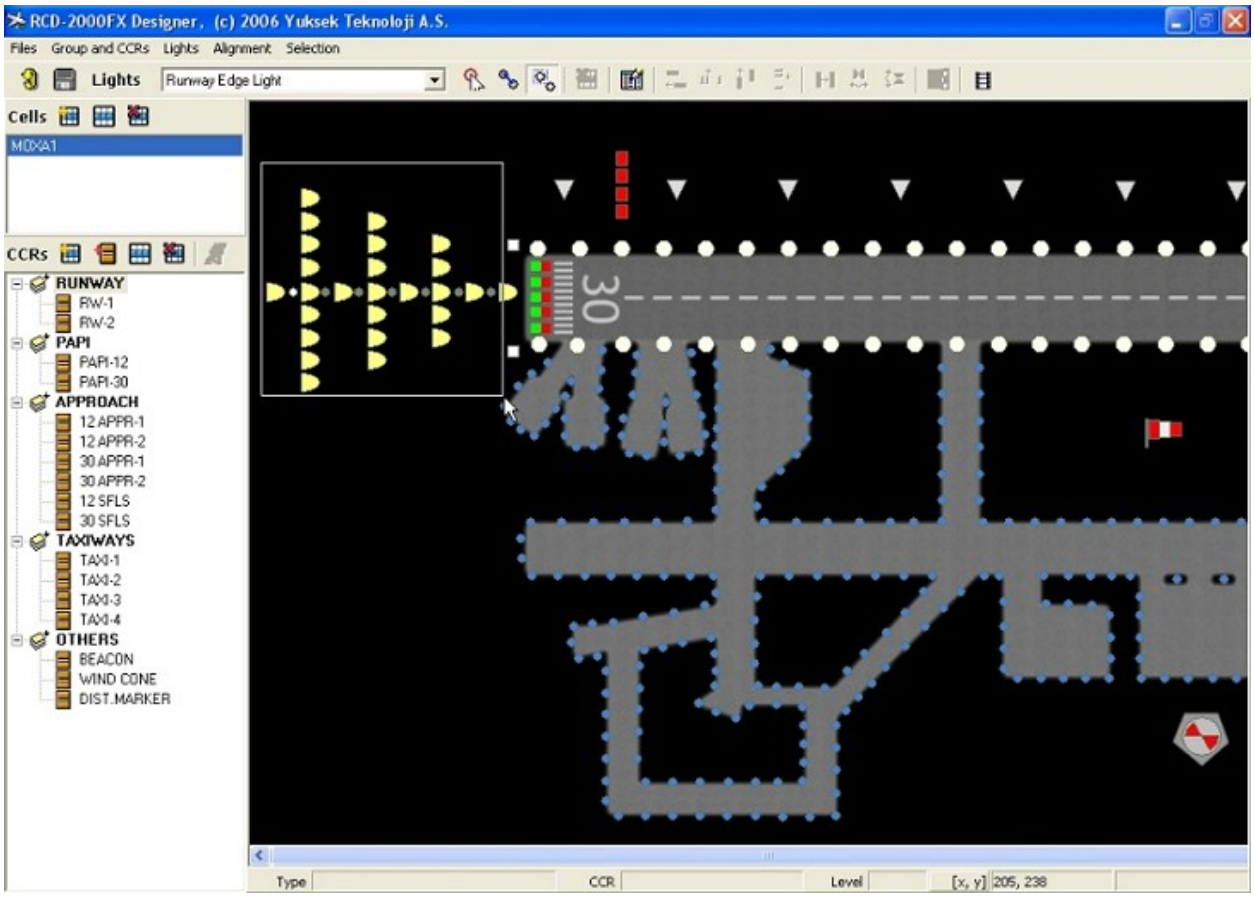
FILES

RCD-2000FX software includes below files.

RCD2000FX.exe	Executable file.
airfield1400.bmp	Airfield base picture.
Data.cfg	Configuration file.
Data.tre	Design file. **If you change this file, you must copy it into other PCs' installation directory.**
Logs	Logs' file directory.

DESIGNER

This module helps to operation designer relation, configuration, location and defining between cell room, CCRs and lights.



CCR (Constant Current Regulator)

System has control card for each CCR.

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Each CCR group separately controlled.

Lights

Each lighting fixture is called light. Lighting fixture symbols:

Runway Edge
Taxiway Edge
Approach
Threshold
Papi
Reil
Rotating Beacon
WindCone
Runaway Distance Marker
Strope Light

Working Modes

System includes three different working modes.

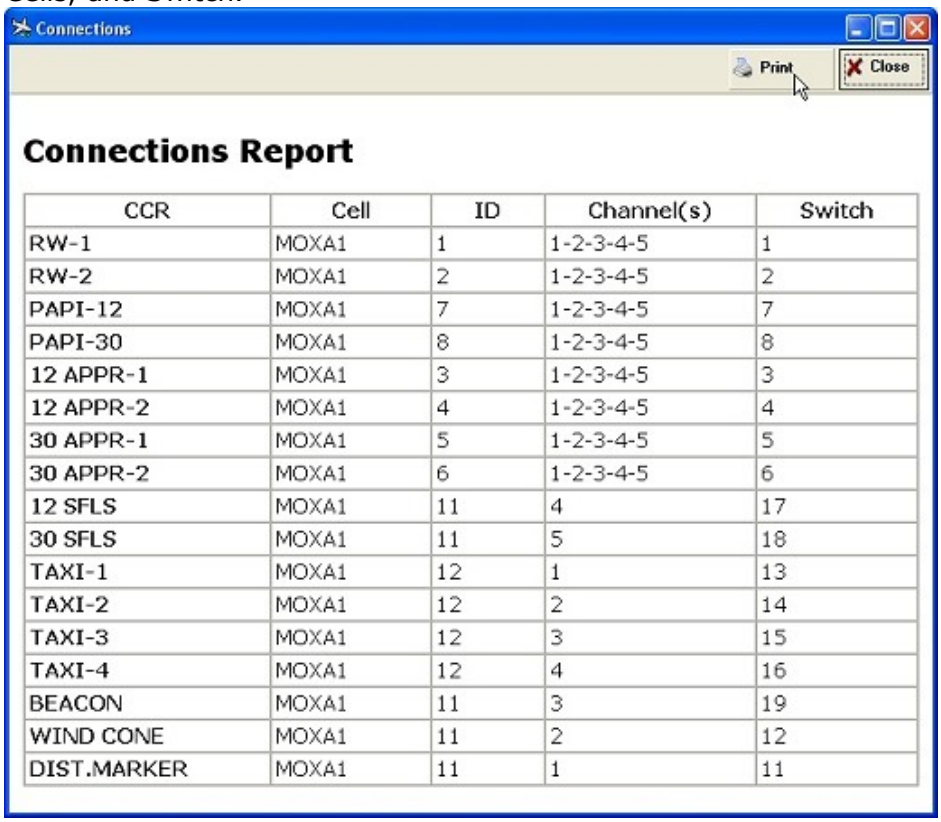
- **Add Light:** Click your mouse anywhere that you want to add light for selected CCR.
- **Add Lights by Line:** This option is used to locate lights on selected line. Follow the below procedure to create a lights line:
    - Select the light fixture symbol from the light list.
    - Click you mouse at the beginning of line and move your mouse to the end point by pushing left mouse key. You can also use Shift and Ctrl key for horizontal or vertical line.
    - Relese the left mouse key.
    - Write the quantity of lights on opening window and click OK button.
- **Edit Mode:** This option used for changing and location of light fixture group. Follow the below procedure to create a lights line:
    - Click your mouse left key on any corner of lights group and select the lights, draw the mouse while left key pressed. Release the left key when all fixture are selected which needed to change.
    - Click on unselected lights by pressing shift key for adding to the list
    - Click on any selected light by pressing shift key for removing from the list.

Click your mouse on any clean place to cancel your selection.

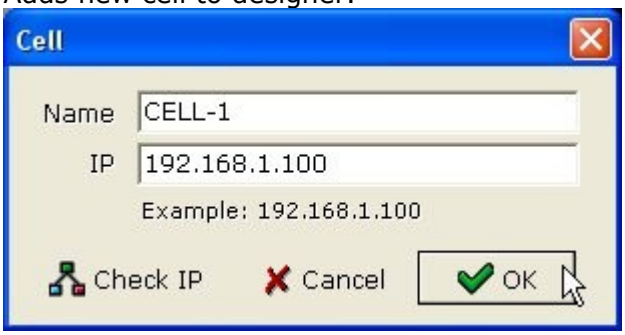
Buttons

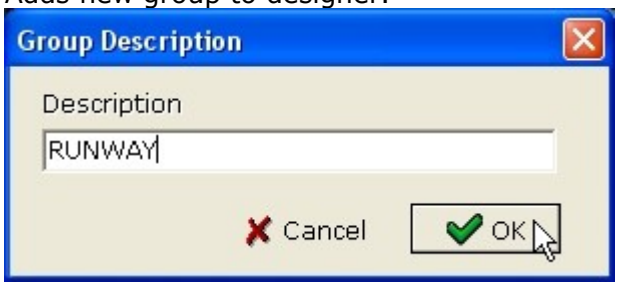
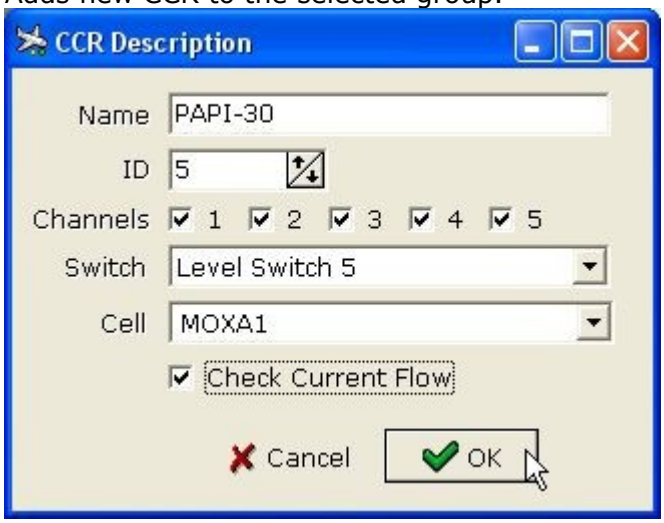
Files

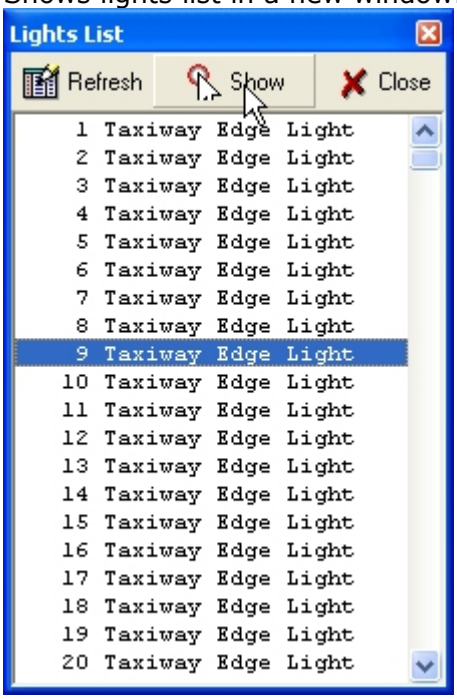
	Load Design File	Loads and shows the design parameters from the file.
	Save Design File	Saves design parameters to the file.
	Compile and Check Integrity	Compiles and checks the design parameters.
	Show Active Mode	Generates active mode presentation from design parameters.
	Connection Report	Generates connection report between Lights, Control Cards, CCRs, Cells, and Switch.
	Export Lights List	Exports all lights to user file.
	Exit	Exits the design module.



CCR	Cell	ID	Channel(s)	Switch
RW-1	MOXA1	1	1-2-3-4-5	1
RW-2	MOXA1	2	1-2-3-4-5	2
PAPI-12	MOXA1	7	1-2-3-4-5	7
PAPI-30	MOXA1	8	1-2-3-4-5	8
12 APPR-1	MOXA1	3	1-2-3-4-5	3
12 APPR-2	MOXA1	4	1-2-3-4-5	4
30 APPR-1	MOXA1	5	1-2-3-4-5	5
30 APPR-2	MOXA1	6	1-2-3-4-5	6
12 SFLS	MOXA1	11	4	17
30 SFLS	MOXA1	11	5	18
TAXI-1	MOXA1	12	1	13
TAXI-2	MOXA1	12	2	14
TAXI-3	MOXA1	12	3	15
TAXI-4	MOXA1	12	4	16
BEACON	MOXA1	11	3	19
WIND CONE	MOXA1	11	2	12
DIST.MARKER	MOXA1	11	1	11

Cells		
	Add Cell	Adds new cell to designer.  • **Name:** Cell name • **IP Address:** Preconfigured Cell Control Card IP address. • **Check IP:** Search network (Moxa) device for the defined IP.
	Edit Selected Cell	Changes the parameters of the selected cell.
	Delete Selected Cell	Deletes the selected cell.

Groups & CCRs		
	Add Group	Adds new group to designer. 
	Add CCR	Adds new CCR to the selected group.  • **Name:** CCR name • **ID:** CCR's control card ID. • **Switch:** CCR's switch name • **Channel:** Connected control card channel settings. • **Cell:** CCR'S cell name.
	Edit Selected Group/CCR	Changes the parameters of the selected group or CCR.
	Delete Selected Group/CCR	Deletes the selected group or CCR and than if you want, clear the CCR assignment.
	Show Selected CCR's Light	Shows and selects the lights of the selected CCR.

Lights		
	Add Light	Adds new light to the clicked point.
	Add Lights by Line	Adds equal spaced lights along the defined line.
	Edit Light	Edits light parameters (position, CCR, type, direction, width).
	Delete Selected Light(s)	Deletes the selected light(s) from designer.
	Change Direction	Changes light direction from left to right or right to left (applicable only strope, approach, threshold, wind cone)
	Change Selected Light(s)	Changes the selected light type.
	Set CCR to Light(s)	Connects the selected CCR to the selected light.
	Show Lights List	Shows lights list in a new window. 

Alignment		
	Align Left Edge	Aligns the selected lights to the left edge of the light first selected.
	Align Top Edge	Aligns the selected lights to the top edge of the light first selected.
	Space Equally, Horizontally	Horizontally aligns three or more selected lights so that the middle lights are equally spaced between the outer lights.
	Space Equally, Vertically	Vertically aligns three or more selected lights so that the middle lights are equally spaced between the outer lights.
	Dublicate	Dublicates the selected light(s).
	Mirror	Mirrors the selected lights.
	Flip	Flips the selected lights.

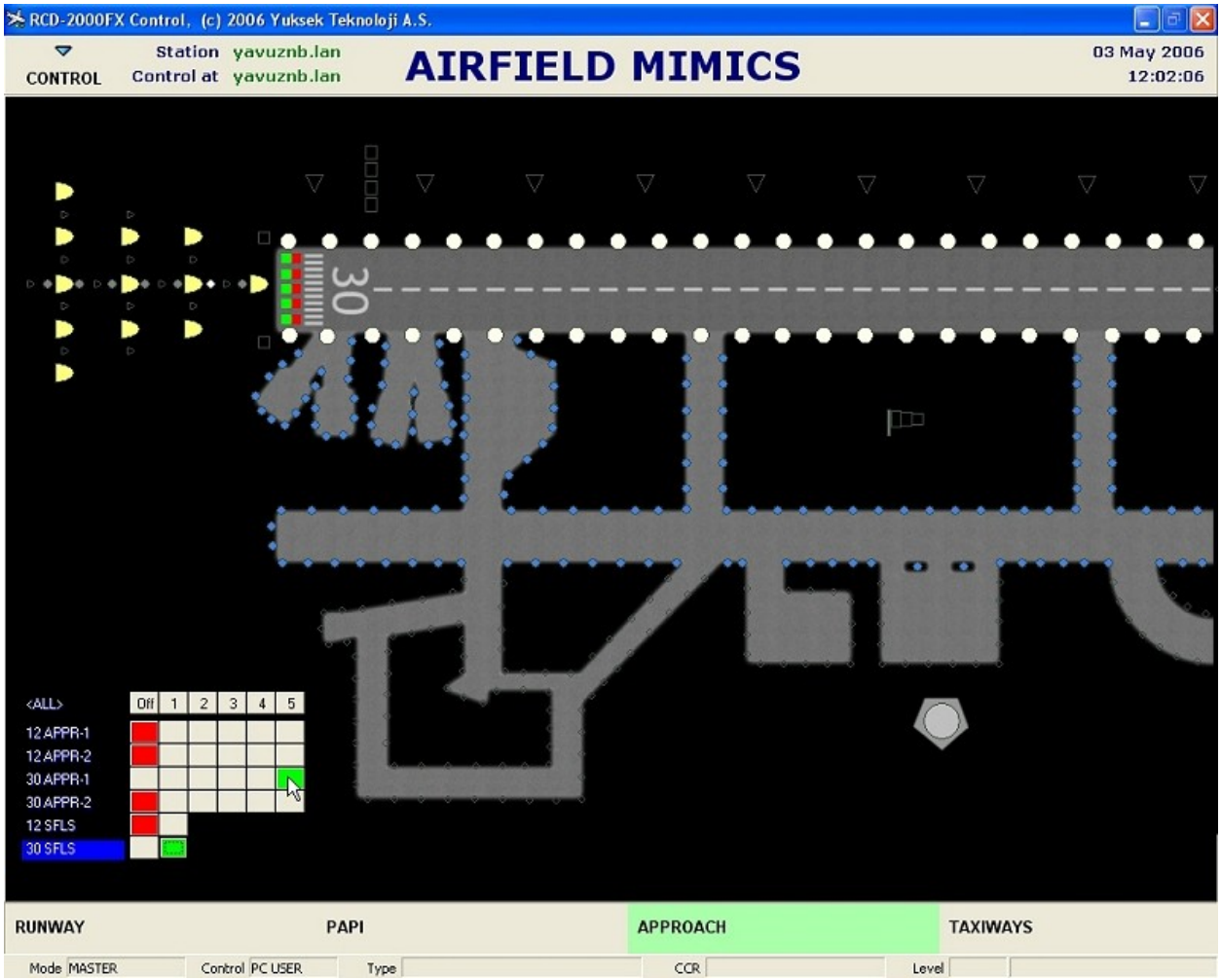
Selection		
	Select All	Selects all lights.
	Invert Selection	Selects the unselected lights, unselects the selected lights.
	UnSelect All	Unselects all lights

PopUp Menu

You can reach to popup menu by clicking your mouse right key. Available options will be seen as active others passive.

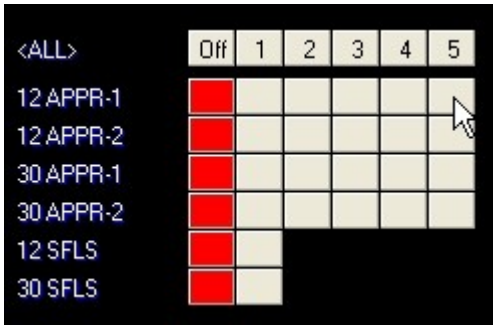
CONTROL

This module is used for online control of all functions.



The up side of the window includes PC name, master PC name, date, time and control button.

At the bottom side, Operation mode and lights information are seen. Default operation mode is **Switch**. Operation modes are Switch, PC USER or Switch/PC.



Select the light brightness level using top bar number 1, 2, 3, 4, 5. Click <ALL> if you want to select all CCRs.

Control Menu

Control menu includes general control buttons:

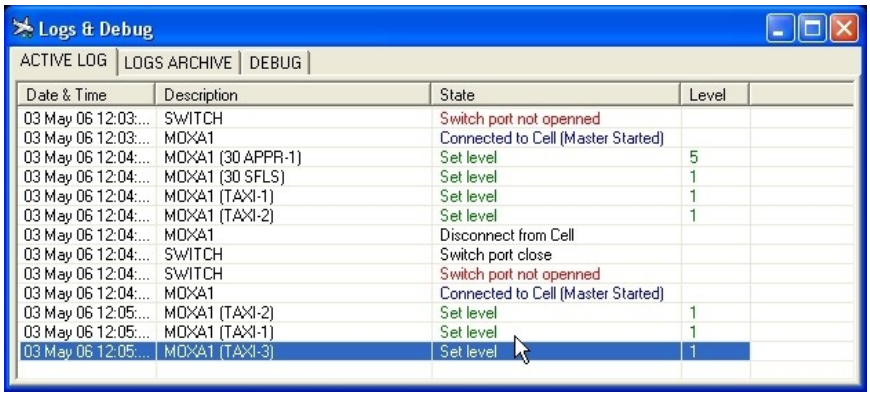
Stop Control: This is just for master PC. It stops master PC operation.

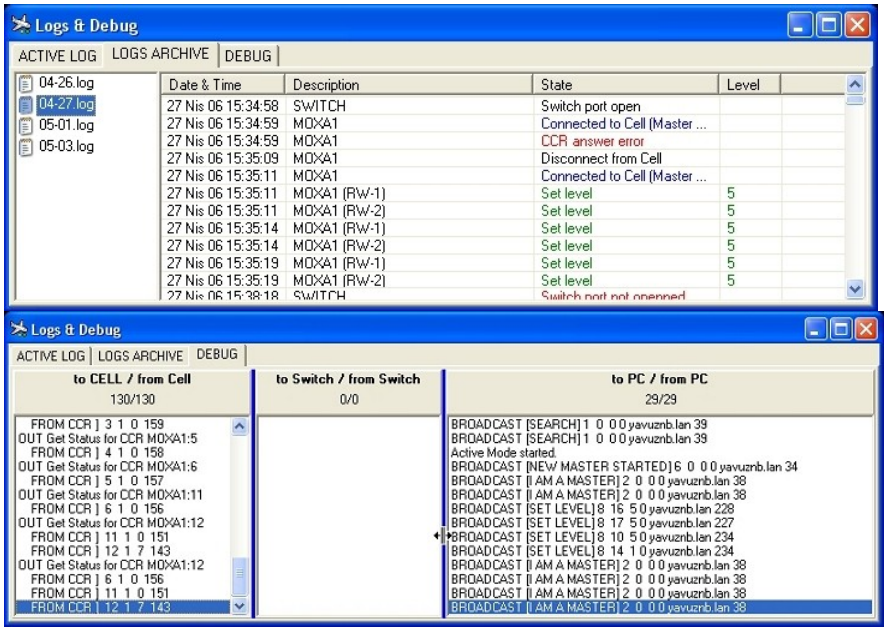
Set as Master: This is for changing client PC as master PC while this changing process system will be off 15 seconds.

Refresh: the monitoring information from CCRs.

System Test: Testing all units' conditions and operation levels. System can control itself, relation with other PCs and all CCRs, connection lines. In case any fault a yellow&red blinks. Select system test option and test the system.

Show Log: Checking daily operation info and reports


Logs & Debug
ACTIVE LOG
LOGS ARCHIVE
DEBUG
Date & Time | Description | State | Level
03 May 06 12:03:... | SWITCH | Switch port not openned
03 May 06 12:03:... | MOXA1 | Connected to Cell (Master Started)
03 May 06 12:04:... | MOXA1 (30 APPR-1) | Set level | 5
03 May 06 12:04:... | MOXA1 (30 SFLS) | Set level | 1
03 May 06 12:04:... | MOXA1 (TAXI-1) | Set level | 1
03 May 06 12:04:... | MOXA1 (TAXI-2) | Set level | 1
03 May 06 12:04:... | MOXA1 | Disconnect from Cell
03 May 06 12:04:... | SWITCH | Switch port close
03 May 06 12:04:... | SWITCH | Switch port not openned
03 May 06 12:04:... | MOXA1 | Connected to Cell (Master Started)
03 May 06 12:05:... | MOXA1 (TAXI-2) | Set level | 1
03 May 06 12:05:... | MOXA1 (TAXI-1) | Set level | 1
03 May 06 12:05:... | MOXA1 (TAXI-3) | Set level | 1


Logs & Debug
ACTIVE LOG
LOGS ARCHIVE
DEBUG
04-26.log
04-27.log
05-01.log
05-03.log
Date & Time | Description | State | Level
27 Nis 06 15:34:58 | SWITCH | Switch port open
27 Nis 06 15:34:59 | MOXA1 | Connected to Cell (Master ...
27 Nis 06 15:34:59 | MOXA1 | CCR answer error
27 Nis 06 15:35:09 | MOXA1 | Disconnect from Cell
27 Nis 06 15:35:11 | MOXA1 | Connected to Cell (Master ...
27 Nis 06 15:35:11 | MOXA1 (RW-1) | Set level | 5
27 Nis 06 15:35:11 | MOXA1 (RW-2) | Set level | 5
27 Nis 06 15:35:14 | MOXA1 (RW-1) | Set level | 5
27 Nis 06 15:35:14 | MOXA1 (RW-2) | Set level | 5
27 Nis 06 15:35:19 | MOXA1 (RW-1) | Set level | 5
27 Nis 06 15:35:19 | MOXA1 (RW-2) | Set level | 5
Logs & Debug
ACTIVE LOG
LOGS ARCHIVE
DEBUG
to CELL / from Cell
130/130
to Switch / from Switch
0/0
to PC / from PC
29/29
FROM CCR] 3 1 0 159
OUT Get Status for CCR MOXA1:5
FROM CCR] 4 1 0 158
OUT Get Status for CCR MOXA1:6
FROM CCR] 5 1 0 157
OUT Get Status for CCR MOXA1:11
FROM CCR] 6 1 0 156
OUT Get Status for CCR MOXA1:12
FROM CCR] 11 1 0 151
FROM CCR] 12 1 7 143
OUT Get Status for CCR MOXA1:12
FROM CCR] 6 1 0 156
FROM CCR] 11 1 0 151
FROM CCR] 12 1 7 143
BROADCAST [SEARCH] 1 0 0 0 yavuznb.lan 39
BROADCAST [SEARCH] 1 0 0 0 yavuznb.lan 39
Active Mode started.
BROADCAST [NEW MASTER STARTED] 6 0 0 0 yavuznb.lan 34
BROADCAST [I AM A MASTER] 2 0 0 0 yavuznb.lan 38
BROADCAST [I AM A MASTER] 2 0 0 0 yavuznb.lan 38
BROADCAST [SET LEVEL] 8 16 5 0 yavuznb.lan 228
BROADCAST [SET LEVEL] 8 17 5 0 yavuznb.lan 227
BROADCAST [SET LEVEL] 8 10 5 0 yavuznb.lan 234
BROADCAST [SET LEVEL] 8 14 1 0 yavuznb.lan 234
BROADCAST [I AM A MASTER] 2 0 0 0 yavuznb.lan 38
BROADCAST [I AM A MASTER] 2 0 0 0 yavuznb.lan 38
BROADCAST [I AM A MASTER] 2 0 0 0 yavuznb.lan 38
BROADCAST [I AM A MASTER] 2 0 0 0 yavuznb.lan 38

TEKSAV TEKNOLOJİ	**Close All Others:** All Client PCs closed by Master PC.

Certificate Number

3964

This is to certify that the Quality Management System of:

Teksav Teknoloji Elektrik Elektronik
Makina Sanayi ve Ticaret Anonim Şirketi

A.O.S.B. 10016 Sokak No:20 Çiğli İzmir / Türkiye

has been assessed and registered by ICS Registrars Ltd. against the following Quality Assurance Standard:

ISO 9001:2000

The scope of registration is detailed as indicated below:

Manufacturing of airfield lighting systems and equipments, aircraft arresting barrier systems and spare parts, net barriers, ground supporting systems, mine detectors and mine clearance accessories, detonation systems (land-marine), shooting control and target systems, training simulators, RF Jammer, radio frequency identification (RFID), IFF- identification friend or foe systems, land platform laser/IR detection and defense system, multipurpose robot, fire suppression systems, CCTV and environmental safety systems, electronic tank level measurement and alarm system, electronic sounding system, ATE (Automatic Test Equipment) and TPS (Test Program Sets)

Date of registration : 17.10.2008
Date of reissued : -
Date of expiry : 14.10.2009

Date of initial assessment : 15.10.2008

President
ICS Registrars Ltd.

General Manager
PROSERT International
Certification Co. Ltd.
(ICS Registrars Ltd. - TURKEY)

This certificate remains valid for 3 years subject to satisfactory maintenance of the system.
Check www.prosert.com.tr for current certificate validity.

Whilst all due care and skill was exercised in carrying out this assessment, ICS Registrars Ltd. accepts responsibility only for proven gross negligence. This is not a legal document and cannot be used as such. This certificate remains the property of ICS Registrars Ltd. to whom it must be returned upon request.

BELGE NO: 2009/12

T.C.
MİLLÎ SAVUNMA BAKANLIĞI

TESİS GÜVENLİK BELGESİ

TÜRKİYE CUMHURİYETİ SAVUNMA SANAYİ MİLLÎ GÜVENLİK MAKAMI tarafından, **10016 Sokak No:20 A.O.S.B. Çiğli/İZMİR** adresinde yerleşik,

TEKSAV TEKNOLOJİ ELEKTRİK ELEKTRONİK MAKİNE SANAYİ VE TİCARET ANONİM ŞİRKETİ'ne

Savunma sanayi ile ilgili faaliyetleri düzenleyen yürürlükteki 5202 sayılı Kanun ve ilgili mevzuat ile NATO Güvenlik Talimatı esaslarına göre tesis güvenliği denetimi yapılmıştır. "MİLLÎ GİZLİ" gizlilik derecesine uygun olarak, gizlilik dereceli bilgi, belge, proje, malzeme ve teçhizatı korumaya yönelik olarak alınan önlemlerin ve mevcut uygulamaların yeterli olduğu, **TEKSAV Teknoloji Elektrik Elektronik Makine Sanayi ve Ticaret Anonim Şirketi** bünyesinde hazırlanan Tesis Özel Güvenlik El Kitabında yer alan güvenlik sisteminin oluşturularak uygulandığı ve

"MİLLÎ GİZLİ" gizlilik dereceli bu belgenin

12 / 05 / 2014 Tarihine kadar geçerli olduğu

TASDİK OLUNUR.

MİLLÎ SAVUNMA BAKANI NAMINA

Kadir AKÇİZMECİ
Tuğgeneral
Müsteşar Yardımcısı Vekili